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NOTICE OF ALLOWANCE AND FEE(S) DUE

33940 7590 04/02/2008

JEFFREY S. WHITTLE
BRACEWELL & PATTERSON
P.O. BOX 61389
HOUSTON, TX 77208-1389

EXAMINER

YACOB, SISAY

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 04/02/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,429

02/13/2004

Jon A. Boaz

027299.02

9073

TITLE OF INVENTION: AUTOMATED METER READING SYSTEM, COMMUNICATION AND CONTROL NETWORK FOR AUTOMATED METER READING, METER DATA COLLECTOR, AND ASSOCIATED METHODS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$720	\$300	\$0	\$1020	07/02/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

33940 7590 04/02/2008

**JEFFREY S. WHITTLE
BRACEWELL & PATTERSON
P.O. BOX 61389
HOUSTON, TX 77208-1389**

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/779,429 02/13/2004 Jon A. Boaz 027299.02 9073

TITLE OF INVENTION: AUTOMATED METER READING SYSTEM, COMMUNICATION AND CONTROL NETWORK FOR AUTOMATED METER READING, METER DATA COLLECTOR, AND ASSOCIATED METHODS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional YES \$720 \$300 \$0 \$1020 07/02/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
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YACOB, SISAY 2612 340-870020

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

YACOB, SISAY

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DATE MAILED: 04/02/2008

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 451 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 451 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/779,429

Applicant(s)

BOAZ, JON A.

Examiner

SISAY YACOB

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to October 30, 2007.
2. ☒ The allowed claim(s) is/are 1-5 and 8-25.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

DETAILED ACTION

1 This communication is in response to applicant's amendment, which was filed October 30, 2007.

2 Amendments and arguments to pending rejected claims 1-42 have been entered and made of record in the application of Boaz for "Automated meter reading system, communication and control network for automated meter reading, meter data collector, and associated method" filed on February 13, 2004.

Claims 1-5, 8-19, 21, 23 and 24 are as previously presented.

Claims 20, 22 and 25 are as originally filed.

Claims 6 and 7 are as previously canceled.

Claims 26-42 are canceled.

Claims 1-5 and 8-25 are pending.

Response to Arguments

3 Applicant's arguments with respect to pending indicated allowable claims 1-5 and 8-25 and pending rejected dependent claims 26-42 have been fully considered. Applicant canceled claims 26-42, which puts the pending claims 1-5 and 8-25

Allowable Subject Mater

4 The following is an examiner's statement of reasons for allowance: The prior arts of record fail to disclose, teach or suggest an automated meter reading network system comprising: a plurality of utility meters each one positioned remote from the other ones of the plurality of utility meters; a plurality of sensors interfaced with each of the plurality of meters so that at least one of the plurality of sensors interfaces with and is positioned adjacent at least one of the plurality of meters to thereby sense utility usage data from each of the plurality of meters; a communication network; a plurality of meter data collectors positioned to collect utility usage data from each of the plurality of sensors so that at least one of the plurality of meter data collectors is positioned adjacent at least one of the plurality of utility meters and in-communication with at least one of the plurality of sensors which interfaces with the at least one of the plurality of utility meters, the plurality of meter data collectors also being adapted to be positioned in communication with each other through the communication network so that each of the plurality of meter data collectors defines a communication node in the communication network and the plurality of meter data collectors defines a plurality of communication nodes in the network; and a host computer positioned remote from the plurality of meter data collectors at a utility central station and in communication with each of the plurality of meter data collectors in the communication network so that each one of the plurality of meter data collectors are adapted to communicate with other ones of the plurality of meter data

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collectors in the communication network, the host computer including network software including instructions that when executed by the host computer cause the host computer to perform the operations of determining a preferred polling sequence route responsive at least in part to a strength of communication signal between the host computer and each of the plurality of meter data collectors and between each of the plurality of meter data collectors along the determined polling sequence route to thereby reduce line-of-site communication problems between each of the plurality of meter data collectors and the host computer, and sending a message packet including routing data to route the message packet along the preferred polling sequence route between the host computer and a selected meter data collector defining a destination node and along the preferred polling sequence route between the destination node and the host computer, the message packet collecting strength of communication signal data between each node along the preferred polling sequence route to the destination node and along the preferred polling sequence route to the host computer, the network software including an autosequencer positioned to initiate systematic polling of the plurality of meter data collectors whereby each of the plurality of meter data collectors is individually attempted to be polled by the host computer to determine a strength of communication signal between the host computer and each of the plurality of meter data collectors, and whereby each of the plurality of meter data collectors also attempt to communicate with each other responsive to the autosequencer to determine a strength of communication signal between one of the plurality of meter data collectors and another one of the plurality of meter

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data collectors, the autosequencer further positioned to determine a communication sequence to each of the plurality of meter data collectors responsive to the strength of communication signal between the host computer and each of the plurality of meter data collectors and responsive to the strength of communication signal between each of the plurality of meter data collectors to define the preferred polling sequence route to each of the plurality of meter data collectors from the host computer, and to update the preferred polling sequence route responsive to strength of communication signal data gathered by each message packet after each subsequent polling sequence to allow the preferred polling sequence route to vary over time.

Also, a message packet including routing data to route the message packet along the preferred communication sequence path between the host computer and the destination node via the at least one intermediate routing node, the message packet configured to rakingly collect respective utility usage data from both the destination node and the at least one intermediate routing node located along the preferred communication sequence path so that utility usage data is collected by the message packet from both the destination node and the at least one intermediate routing node along the preferred communication sequence path for delivery to the host computer.

Furthermore, a memory positioned within the stationary housing and associated with and in communication with the controller to store data therein, the memory including network software to receive a message packet including a payload carrying utility usage data from the at least one other meter data

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collector, to combine the local utility usage data with the utility usage data from the at least one other meter data collector, and to communicate the utility usage data remotely through the communication network to the requesting remote host computer along a route determined by the requesting remote host computer.

Conclusion/Correspondence

5 Any inquiry concerning this communication or earlier communications from the examiner should be directed to SISAY YACOB whose telephone number is (571)272-8562. The examiner can normally be reached on Monday through Friday 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffery A. Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-

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free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

Sisay Yacob

3/25/2008

/Davetta W. Goins/
Acting SPE of Art Unit 2612